

DETAILED ACTION

Claim Objections

1. Claims 1, 8, and 15-16 are objected to because of the following informalities: Claims 1, 8, and 16 recite either "layer A" or "layer B" rather than "first outer layer A" or "second outer layer B", respectively. Appropriate correction is required.
2. Claim 15 recites "interloping" which appears to be a misspelling of "interlooping".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry et al. (U.S. Patent Application Publication No. 2005/0180704).

6. Regarding claim 1, Terry et al. teaches a tape for bandaging cable harnesses (See Abstract), comprising a backing with a first outer layer A inherently having a first side (support 16, paragraph [0032]), wherein the first side of the first outer layer A connected to a separate layer C (open layer 10', paragraph [0032]) over an entire area of the first side of the first outer layer A (Fig. 4), the outer first layer A is composed of a scrim or woven fabric (paragraph [0039]), and the layer C being composed of a textile having an open but stable three-dimensional structure (paragraphs [0033] and [0034]).
7. Terry et al. does not explicitly teach wherein the layer C is firmly connected on an open side to a second separate outer layer B over the entire area of a first side of the outer layer B, wherein the outer layer B is composed of a velour, scrim, woven fabric or formed-loop knit.
8. However, Terry et al. teaches a support layer composed of woven fabric or scrim (paragraph [0039]). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a support layer on open layer 10' for added protection or mechanical strength. The duplication of parts is generally recognized as being within the level of ordinary skill in the art, absent unexpected results. Providing a second support would have achieved expected results such as protection or mechanical strength. Mere duplication of parts has no patentable significance unless a new and unexpected result is produced. MPEP 2144.04 (VI) B. *In re Harza*, 124 USPQ 378, 380 (CCPA 1960). The resulting structure of Terry et al. teaches wherein the layer C is firmly connected on an open side to the second separate outer layer B over the entire area of a first side of the outer layer B.

9. The resulting structure of Terry et al. teaches further comprising a mechanical bond formation joining, without adhesive, the separate layers A, B and C to form an assembly (paragraph [0049]).

10. While there is no disclosure that the tape is abrasion-resistant and noise-suppressing as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction”. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

11. It is the examiner’s position that the preamble does not state any distinct definition of any of the claimed invention’s limitations and further that the purpose or intended use, i.e. abrasion-resistant and noise-suppressing, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art invention and further that the prior art structure which is a tape identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

12. Regarding claim 3, given that Terry et al. teaches wherein first outer layer A comprises polyester (paragraph [0033]) and layer C comprises polyester or propylene (paragraph [0041])

which are materials identical to those of the presently claimed invention, it is expected that the backing of Terry et al. inherently possesses the abrasion resistance of the presently claimed invention.

13. Regarding claim 4, Terry et al. teaches wherein the layer C is a three-dimensional nonwoven structure (paragraphs [0033] and [0034]).

14. Regarding claim 5, Terry et al. teaches wherein the layer C has a thickness of 0.1 to 6 mm (paragraph [0033]).

15. Regarding claim 7, the resulting structure of Terry et al. teaches wherein the layers A, B, and C comprise wear-resistant polymers (paragraphs [0033] and [0041]) given that the presently claimed invention discloses that wear-resistant polymers include polyesters and polyolefins (paragraph [0048]).

16. Claims 1, 3-5, 7-8, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulper (DE 10039982) in view of Blackmore et al. (5,695,373) and Gladfelter et al. (U.S. Patent No. 6,309,721). It is noted that the disclosures of Kulper are based on (U.S. Patent Application Publication No. 2004/0082243) which is an English equivalent of the reference.

17. Regarding claim 1, Kulper teaches an abrasion-resistant and noise-suppressing tape for bandaging cable harnesses (See abstract, paragraph [0115]), comprising a backing with a first outer layer A inherently having a first side (intermediate, paragraph [0069]), wherein the first intrinsically side of the first outer layer A is connected to a separate layer C (backing, paragraph [0064]) over an entire area of the first side of the first outer layer A (paragraph [0069]), wherein the first outer layer A is composed of a formed-loop knit (paragraph [0071]), and the layer C is composed of a textile intrinsically having an open but stable three-dimensional structure (Multiknit, paragraphs [0064]-[0068]).

18. Kulper fails to teach a separate second outer layer B.

19. However, Blackmore et al. teaches a composite comprising wherein a layer C is firmly connected on an open side to a separate second outer layer B over an entire area of a first side of the second outer layer B (col. 4, lines 42-43 and 54-60), wherein the second outer layer B is composed of a scrim (col. 4, lines 47-48).

20. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a separate second outer layer B firmly connected to layer C of Kulper to provide more flexibility (Blackmore et al., col. 4, lines 34-35).

21. Kulper fails to teach further comprising a mechanical bond formation joining, without adhesive, the separate layers A, B and C to form the backing.
22. However, Gladfelter et al. teaches a sleeve for noise-suppression (See Abstract) further comprising a mechanical bond formation joining, without adhesive, separate layers A, B and C to form the backing (outer layer, support layer, inner layer, col. 3, lines 56-65).
23. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a mechanical bond formation joining, without adhesive, separate layers A, B and C of Kulper as modified by Blackmore et al. to produce an interlocked laminated three-layer product having high hoop strength and substantial flexibility (Gladfelter et al., col. 3, line 64-col. 4, line 2).
24. Regarding the limitation that the tape is abrasion-resistant and noise-suppressing, Applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction”. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

25. It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. abrasion-resistant and noise-suppressing, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art invention and further that the prior art structure which is a tape identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

26. Regarding claims 3 and 7, Kulper as modified by Blackmore et al. and Gladfelter et al. teaches wherein the layers B and C comprise wear-resistant polymers (Kulper, polyester, paragraph [0081]; Blackmore et al., polyester, col. 4, lines 42-45).

27. Kulper fails to teach wherein the layer A comprises wear-resistant polymer.

28. However, Blackmore et al. wherein a layer comprises wear-resistant polymer (polyester, col. 4, lines 42-45).

29. It would have been obvious to one of ordinary skill in the art at the time of the invention to include polyester in layer of Kulper to allow greater elongation and tear resistance (Blackmore et al., col. 4, lines 45-47).

30. Given that Kulper as modified by Blackmore et al. and Gladfelter et al. teaches wherein first outer layer A comprises polyester (Blackmore et al., col. 4, lines 42-45) and layer C comprises polyester (Kulper, paragraph [0081]) which are materials identical to those of the presently claimed invention, it is expected that the backing of Kulper as modified by Blackmore et al. and Gladfelter et al. inherently possesses the abrasion resistance of the presently claimed invention.

31. Regarding claim 4, Kulper teaches wherein the layer C is a nonwoven structure (paragraphs [0064]-[0065]) that is intrinsically three-dimensional.
32. Regarding claim 5, Kulper teaches wherein the layer C has a thickness of 0.4 mm (paragraph [0120]) which falls within the claimed range of 0.2 to 3 mm.
33. Regarding claim 8, Kulper as modified by Blackmore et al. and Gladfelter et al. teaches wherein a second side of layer B is coated with a self-adhesive layer, wherein the second side of the layer B is located opposite to the first side of the layer B and layer C (Kulper, paragraph [0083]).
34. Regarding claim 15, the resulting structure of Kulper as modified by Blackmore et al. and Gladfelter et al. teaches wherein the mechanical bond formation comprises a stitching (Gladfelter et al., col. 3, lines 64-65) or an intermeshing given that layers A, B, and C are interlocked (Gladfelter et al., col. 3, lines 65-67).
35. Regarding claim 16, the resulting structure of Kulper as modified by Blackmore et al. and Gladfelter et al. teaches wherein the mechanical bond formation comprises the layer C intermeshed with the layer A and the layer C intermeshed with the layer B given that layers A, B, and C are interlocked (Gladfelter et al., col. 3, lines 65-67).

Response to Arguments

36. Applicants' arguments filed 21 September 2011 have been fully considered but they are not persuasive.
37. Applicants amended claim 1 to included limitations of cancelled claim 6, claim 8 to recite a specific location of self-adhesive layer, cancelled claims 13-14, and added new claims 15-16.
38. Applicants argue that paragraph [0049] of Terry fails to teach mechanical bond formation without adhesive but rather teaches the use of adhesive.
39. However, while it is agreed that embodiments of Figures 4-6 utilize adhesive from paragraph [0049], it can be seen that the embodiments of Figures 2-3 do not require adhesive (paragraphs [0029]-[0031], [0049]).
40. Applicants argue that "Gladfelter's support layer 11 is not a layer per se".
41. However, given the broadest reasonable interpretation of "layer" and given that Gladfelter et al. explicitly refers to "11" as support layer, it is the Examiner's position that it would function as layer as presently claimed.
42. Applicants argue that Gladfelter et al. fails to teach mechanical bond formation joining separate layers A, B, and C.
43. However, there is nothing in claim 1 that requires each individual layer to be mechanically bonded, i.e. stitched together. Further, it is the Examiner's position that Gladfelter et al. meets claim 16 given that stitching layer 12 and 13 together would necessarily result in layer 11 being intermeshed with each of layers 12 and 13 given that it is sandwiched in between.
44. Applicants argue that none of the cited references teach new claims 15 and 16.

45. However, as disclosed in the rejection above, Kulper as modified by Blackmore et al. and Gladfelter et al. teaches the recited claims.

Conclusion

46. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

47. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHENG YUAN HUANG whose telephone number is (571) 270-7387. The examiner can normally be reached on Monday-Thursday from 10 AM to 6 PM.

49. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho, can be reached at 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

50. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. H./

Cheng Yuan Huang

Examiner, Art Unit 1787

October 13, 2011

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1787